



Available online at www.sciencedirect.com

ScienceDirect

Procedia Computer Science 86 (2016) 1 – 6

Procedia
Computer Science

The 2016 INTERNATIONAL ELECTRICAL ENGINEERING CONGRESS
(iEECON2016)



March 2-4, 2016
Chiang Mai, Thailand

Message from the iEECON2016 General Chair

The 2016 International Electrical Engineering Congress (iEECON2016) is the fourth year premier international conference organized by EEAAT, the Electrical Engineering Academic Association (Thailand). In comparison with the third iEECON last year, this year conference shows a rapid growth in terms of not only the number of papers and participants but also the debut of industry technology in the technical sessions. In addition, good quality papers published in the Proceedings of iEECON2016 will be submitted for inclusion in the abstract book of iEECON2016 and will be published in a periodic journal, *Procedia Computer Science*, indexed in SCOPUS after each paper is reviewed and (if any) satisfactorily modified according to the reviewer comments.

On behalf of the Electrical Engineering Academic Association (Thailand), EEAAT, and the organizing committee, we would like to deeply express our sincere appreciation for all participations, both in academics and industries, who play important roles on the great effort on their contributions to the conference. To get achieve at this point, all technical program committee members and voluntary reviewers have worked very hard. Without their cooperation, this event would not have been successfully possible. The great appreciation must be addressed for them. Special thanks also go to the keynote speakers, invited speakers, authors, and sponsors for strongly supporting the conference.

Finally, welcome everyone to the conference. We hope you find iEECON2016 to be a good opportunity to meet people and make yourself known by exchanging experiences in both technical and non-technical information. Please enjoy Chiang Mai as a good place to break up your hard-working days and to refresh your energy for the future experience.



Professor Dr. Apirat Siritaratiwat

General Chair of iEECON2016

Message from the iEECON2016 Technical Program Chair

On behalf of the Technical Program Chair, I would like to welcome you to The 2016 International Electrical Engineering Congress (iEECON2016) held at Chaing Mai, Thailand during March 2nd - 4th, 2016. This congress provides five international conferences for expert discussions on the latest research and development in the field of communications, electronics and control, power and energy, digital signal processing and computer and information technology area. The program consists of 22 regular sessions and 2 special sessions. In addition, the program is further enriched by 2 keynote presentations offered by world-renowned researchers in the fields in the congress. We hope that this congress will enrich not only the technical knowledge in electrical engineering field but also enlarge the network of lasting friendships and future collaborations.

I very much hope that you find the technical program enjoyable, stimulating and precipitous of discussion. On behalf of the program committee members, I would like to thank you all for attending and supporting iEECON2016 and helping to make it a success. I hope you have a fulfilling and enjoyable time in Chiang Mai, Thailand and will take away fond memories of both the conference and your stay.

I would like to express my gratitude and sincere thanks to all the technical program chair members, reviewers and authors for their time and effort. As you will agree, the technical success of this conference is due to the unselfish contributions of these individuals. I also thank all speakers to make the technical program very interesting, fruitful and colorful.

I do hope that you enjoyed this congress and that I may see you all again next year.



Assistant Professor Dr. Anan Kruesubthaworn

Technical Program Chair of iEECON2016

Honorary Chair

Colonel Dr. Setthapong Malisuwan

Organizing Committee

Chair of Telecom, Commissioners. (The National Broadcasting and Telecommunications Commission)

General Chair

Apirat Siritaratiwat

Khon Kaen University, Thailand

General Co-Chair

Pornchai Supnithi

King Mongkut's Institute of Technology Ladkrabang

Vice Chair

Surachai Chaitusaney

Chulalongkorn University, Thailand

International Technical Committees

Wanlop Surakamponporn

Thailand Advanced Institute of Science and Technology, Thailand

Vichate Ungvichian

Florida Atlantic University, USA

Sarah Thompson

University of York, UK

Mark Re

Seagate Technology, USA

Hiroshi Matsuno

University of Yamaguchi, Japan

Tim Mews

University of Alabama, USA

Athikom Roeksbutr

Mahanakorn University, Thailand

Technical Advisory Committees

Somchai Hirunvarodom

Rajamangala University of Technology Thanyaburi, Thailand

Wekin Piyarat

Srinakarintarawirote University, Thailand

Kosin Jamnongthai

King Mongkut's University of Tech., Thonburi, Thailand

Prayoot Akkarackthalin

King Mongkut's University of Technology, North Bangkok, Thailand

Decha Wilairat

Mahidol University, Thailand

Boonchouy Supmonchai

Chulalongkorn University, Thailand

Pinit Tepsathorn

Srinakharinwirot University, Thailand

Nathaphop Nimpitiwan

Bangkok University, Thailand

Suttichai Premrudeepreechacharn Chiang Mai University, Thailand

Technical Program Chair

Anan Kruesubthaworn Khon Kaen University, Thailand

Sommart Sang-ngeon Mahanakorn University

Technical Conference Chairs

Jukkrit Tugapanij Mahanakorn University, Thailand

Paul Nutter University of Manchester

Worawat Sa-ngiamvibool Mahasarakham University, Thailand

Kittipong Tonmitr Khon Kaen University, Thailand

Krischonme Bhumkittipich Rajamangala Uni. of Technology Thanyaburi, Thailand

Boonyung Plangklang Rajamangala Uni. of Tech. Thanyaburi

Arkorn Kaewrawang Khon Kaen University, Thailand

Theerayuth Chatchanayeunyong Mahasarakham University, Thailand

Mustafa M. Aziz University of Exeter

Lin Min Min Mint Shinawatra University

Pichitpong Soontornpipit Mahidol University, Thailand

Kittpitch Meesawat Khon Kaen University, Thailand

Special Session Chair

Jesada Sivaraks The National Broadcasting and Telecommunications Commission, Thailand

Publication Chair

Anan Kruesubthaworn Khon Kaen University, Thailand

Publicity Chair

Nattawoot Suwannata Mahasarakham University, Thailand

Financial Chair

Wanchai Chankaipol Sripatum University, Thailand

Registration Chair

Cattareeya Suwanasri

King Mongkut's University of Technology North Bangkok, Thailand

Local Arrangement Chair

Dhanavit Chulikavit

Chiangmai University, Thailand

Web Site Arrangement Chairs

Niwat Angkawisittpan

Mahasarakham University, Thailand

Nattawoot Suwannata

Mahasarakham University, Thailand

Nopanom Kaewhanam

Mahasarakham University, Thailand

General Secretariat

Chonlatee Photong

Mahasarakham University, Thailand